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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,478	03/10/2004	Moshe Alon	P05441	3308

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EXAMINER	
LUU, AN T	

ART UNIT	PAPER NUMBER
2816	

DATE MAILED: 12/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/797,478	ALON, MOSHE	
	Examiner	Art Unit	
	An T. Luu	2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 November 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 November 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Applicant's Amendment filed on 11-14-05 has been received and entered in the case. The rejections set forth in the previous Office Action are maintained as indicated below.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-10 and 15-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over PRIOR ART (Fig. 2), hereinafter "FIG 2" in view of the Knotz reference (US Patent 6,289,055).

FIG 2 discloses a frequency monitor circuit configured to receive at least one monitored clock (output of 21) whose frequency is to be monitored, said frequency monitor circuit comprising: a reference window generator (22), operative to output a reference window signal defining a reference window, the reference window having a given duration; a monitored clock counter (24), operative to count all pulses in the monitored clock that occur within the duration of said reference window and to output a corresponding pulse count and a comparator 27 responsive to the pulse count and a given threshold M to output a corresponding indication of frequency deviation as partially required by claim 1.

FIG 2 does not discloses at least two comparators, each comparator being operative to compare said pulse count with a respective given threshold value and to output a corresponding indication of frequency deviation as required by the claim.

Knotz discloses in figure 2 an apparatus comprising a pulse signal circuit 1 to produce a pulse count and at least two comparators (31 and 32), responsive to said pulse count (i.e., signal on line 2), each comparator being operative to compare said pulse count with a respective given threshold value (i.e., voltage value V1 and V2) and to output a corresponding indication of frequency deviation (S31 and S32) as required by the claim.

It would have been obvious to one skilled in the art at the time the invention was made to incorporate the teaching of Knotz into the PRIOR ART since it would provide different readings at the same moment.

A skilled artisan would be motivated to combine the above arts for the benefit of determining a specific range or bandwidth of the pulse signal.

As to claim 2, figure 2 of Knotz discloses a storage and logic module 6, responsive to outputs of comparators, wherein the reference window generator, the monitor clock counter and the comparators are operative to function repeatedly and the storage and logic module is operative to store one or more indicating output by the comparators, the stored indications being available for read out at terminal SD'.

As to claims 3 and 4, element 6 of Knotz is a simple latch wherein information is process based on one parameter (i.e., Data input at node D). However, it is common nowadays to have a simple miniature processor to analyze data for statistically purposes. Thus, it would have been obvious to one skilled in the art to replace a simple latch with an off-the-shelf processor to process information or data as required by the claim.

As to claim 5, the above arts do not disclose the aforementioned circuit being fabricated on an IC. However, they are commonly form on the same IC for the advantage of uniform temperature variation and to reduce variation in fabricating process.

As to claim 6, element 21 of FIG 2 is seen as a PLL circuit because it is known in the art that a PLL circuit is for producing a high frequency signal from a reference signal having relatively low frequency.

As to claim 7, FIG 2 discloses a frequency multiplier 23 to produce the at least one clock.

As to claim 8, FIG 2 shows RWG and MCC forming part of the frequency multiplier.

As to claim 9, they are rejected for reading on structure of elements 22 and 24 shown in FIG2.

As to claim 10, the scope of claim is similar to that of claim 5. Therefore, it is rejected for the same reason set forth above.

As to claims 15-24, the scopes of claims are similar to that of claims 11-14. Therefore, they are rejected for the same reason set forth above.

3. Claims 11-14 and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over PRIOR ART (Fig. 2), hereinafter "FIG 2" in view of the Knotz reference (US Patent 6,289,055) and further in view of the Volk et al reference (US Patent 6,542,013).

PRIOR ART and Knotz in combination discloses all the claimed invention except for teaching a plurality and a selector to provide one of the plurality clock to the monitor clock counter as required by claim 11.

Volk discloses in figure 2 a PLL circuit 210 providing a plurality of clock signals PH1-T and a selector 208 to select one of the clock signals to be monitored as required by the claim.

It would have been obvious to one skilled in the art at the time the invention was made to incorporate the teaching of Volk into combination of the PRIOR ART and Knotz since a PLL can be implemented in many different ways.

A skilled artisan would be motivated to utilized teaching of Volk since Volk circuit is capable of providing various clock signals from a single clock generator such that cost and space of the circuit can be reduced.

As to claim 12, the above arts do not disclose the aforementioned circuit being fabricated on an IC. However, they are commonly form on the same IC for the advantage of uniform temperature variation and to reduce variation in fabricating process.

As to claim 13, it is obvious that the duration of the reference window being different for each monitored clock since each clock has its frequency different from the others.

As to claim 14, Knotz discloses in column 3, lines 27-29 that threshold value of V1 and V2 are different.

As to claims 25-18, the scopes of claims are similar to that of claims 11-14. Therefore, they are rejected for the same reason set forth above.

Response to Arguments

4. Applicant's arguments filed 11-14-05 have been fully considered but they are not persuasive.

Regarding the rejection of claims under 35 USC 103, Applicant has argued that prima facie case of obviousness is not established. Examiner respectfully disagrees since the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Modifying comparing to a single reference value to comparing to two different reference values is a common knowledge generally available to one of the ordinary skill in the art. Comparing a value to a single reference value is for determining over/under scenario wherein comparing value to two reference values is for determining within/beyond range. A common term for comparing to determine a range is called "window" or "hysteresis". The combination of prior arts is based on general knowledge, and not based on Applicant's disclosure. Further, Examiner has provided a motivation to combine the prior arts. Therefore, a prima facie case of obviousness has been established.

Secondly, Applicant has argued that the outputs of comparators of the Knotz reference do not represented an "indication of frequency deviation". Examiner respectfully disagrees since figure 3 of Knotz clearly indicates a frequency that a reference signal (i.e., signal m) is above a first threshold V1 (i.e., signal S31) and a frequency that a reference signal is above a second threshold V2 (i.e., signal SC'). Therefore, the outputs of the comparators indicate changes of the frequency of the input signal with respect to predetermined values V1 and V2.

Lastly, Applicant has argued that comparators in Knotz are used for a different purpose. Examiner respectfully disagrees since a single device/circuitry can be applicable in various applications.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to An T. Luu whose telephone number is 571-272-1746. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

An T. Luu
12-20-05

TIMOTHY P. CALLAHAN
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